

Abstract of the Disclosure

A linear actuator is provided, comprising a housing defining an interior channel, a stop extending from the housing and displaceable relative to the housing, and at least one wire formed of a shape-memory alloy, the wire being attached at a first end to the stop and at a second end to the housing. When heated to a predetermined temperature, the wire applies a pulling force to the stop to cause the stop to slide in a first direction into the housing interior channel. A spring located in the housing interior channel applies a biasing force to the stop in a second direction counter to the first direction when the wire cools, thereby returning the stop to the unactuated position. A wire heater is provided, which may be an electrical source for resistive heating of the wire. Multiple actuators of the present invention may be configured in parallel to increase the force generated by the wires. In yet another embodiment the actuators of the invention may be arranged in a serial configuration for controlling a rotary or carousel dispenser.